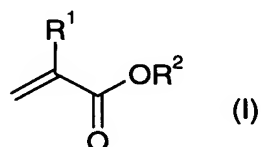


Claims

5 1. A process for preparing poly(meth)acrylates curable with actinic radiation and/or dual-cure poly(meth)acrylates, comprising the following steps:

a) preparing a poly(meth)acrylate containing hydroxy-functional side chains by polymerizing

10 aa) at least one (meth)acrylate of the general formula (I) as component A

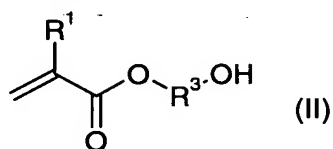


in which

R^1 is H, CH_3 or CH_2OH and

15 R^2 is an alkyl radical which is unsubstituted or substituted by functional groups such as acrylic, ether, amino, epoxy, halogen or sulfonic acid groups, and

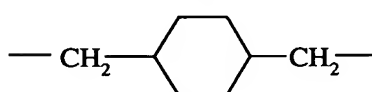
20 ab) at least one hydroxyalkyl (meth)acrylate of the general formula (II) as component B



in which

R^1 is H, CH_3 or CH_2OH and

R^3 is $-(\text{CH}_2)_n-$, $-\text{CH}_2-\text{CH}(\text{CH}_3)-\text{CH}_2-$ or $-\text{CH}_2\text{CH}(\text{CH}_3)-$ or $-\text{CH}(\text{CH}_3)\text{CH}_2-$ or



25

n is at least 2, and

ac) if desired, further comonomers, copolymerizable with the (meth)acrylates of the general formula (I) and (II), as component C, and

5 ad) if desired, auxiliary monomers as component D;

and

10 b) transesterifying or esterifying the poly(meth)acrylate containing hydroxy-functional side chains with a (meth)acrylate or (meth)acrylic acid in the presence of an enzyme which catalyzes the transesterification or esterification.

15 2. A process as claimed in claim 1, wherein step a) is carried out using

- 10 to 80% by weight of component A,
- 10 to 80% by weight of component B,
- 0 to 50% by weight of component C, and
- 0 to 15% by weight of component D.

20

3. A process as claimed in claim 1 or 2, wherein enzymes used in step b) are hydrolases selected from the group consisting of lipases, esterases, and proteases.

25 4. A process as claimed in any of claims 1 to 3, wherein step b) is carried out using methyl, ethyl, 2-ethylhexyl or butyl (meth)acrylate.

5. A process as claimed in any of claims 1 to 4, wherein the temperature at which step b) is conducted is 20 to 100°C, preferably 20 to 80°C.

30 6. A process as claimed in any of claims 1 to 5, wherein component B is selected from the group consisting of 2-hydroxyethyl (meth)acrylate, 2-hydroxypropyl (meth)acrylate, and hydroxybutyl (meth)acrylate.

35 7. A process as claimed in any of claims 1 to 6, wherein 5 to 100% of the side chain of the poly(meth)acrylate prepared in accordance with step a) have been (meth)acrylated.

8. Poly(meth)acrylates curable with actinic radiation and/or dual-cure poly(meth)acrylates preparable by a process as claimed in any of claims 1 to 7.
- 5 9. The use of poly(meth)acrylates curable with actinic radiation and/or dual-cure poly(meth)acrylates as claimed in claim 8 or prepared by a process as claimed in any of claims 1 to 7 as a component in the preparation of dispersions or as a component in coating formulations, preferably in actinic-radiation-curable and/or dual-cure coatings or topcoats, more preferably in transparent clearcoat materials.
- 10 10. A topcoat containing
- 15 - 5 to 80% by weight of at least one poly(meth)acrylate curable with actinic radiation and/or dual-cure poly(meth)acrylate as claimed in claim 8 or prepared as claimed in any of claims 1 to 7,
 - 0.5 to 15% by weight of at least one photoinitiator,
 - 0.5 to 8% by weight of further auxiliaries and additives,
 - 20 0 to 40% by weight of pigments, and
 - 0 to 40% by weight of at least one filler.
11. A process for preparing a coating formulation as claimed in claim 10, in which the individual components are mixed with one another.
- 25 12. The use of a coating formulation as claimed in claim 10 as a topcoat.